SEQUENCE LISTING

5	(1) GENER	AL INFORMATION:
	(i) <i>i</i>	APPLICANT: Innis, Michael
		Creasey, Abla
10	(ii) '	TITLE OF INVENTION: Chimeric Proteins
	(iii) 1	NUMBER OF SEQUENCES: 37
	(iv)	CORRESPONDENCE ADDRESS:
15		(A) ADDRESSEE: Chiron Corporation
		(B) STREET: 4560 Horton St.
		(C) CITY: Emeryville
ेक्स .इन्हें		(D) STATE: CA
17 14		(E) COUNTRY: USA
20		(F) ZIP: 94608
<u>[</u>]		
15 11 12 12 13 13 15 15 15 15 15 15 15 15 15 15 15 15 15	(v)	COMPUTER READABLE FORM:
H ; -		(A) MEDIUM TYPE: Floppy disk
pañ Fili		(B) COMPUTER: IBM PC compatible
14 125		(C) OPERATING SYSTEM: PC-DOS/MS-DOS
lui.		(D) SOFTWARE: PatentIn Release #1.0, Version #1.30B
had had	(vi)	CURRENT APPLICATION DATA:
	•	(A) APPLICATION NUMBER: US
30		(B) FILING DATE: 05-AUG-1994
-		(C) CLASSIFICATION:
	(viii)	ATTORNEY/AGENT INFORMATION:
		(A) NAME: Savereide, Paul B.
35		(B) REGISTRATION NUMBER: 36,914
		(C) REFERENCE/DOCKET NUMBER: 0990.001
	(ix)	TELECOMMUNICATION INFORMATION:
		(A) TELEDHONE, 510-601-2585

(B) TELEFAX: 510-655-3542

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 51 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(ii) MOLECULE TYPE: peptide

(D) TOPOLOGY: linear

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

Cys Ala Phe Lys Ala Asp Asp Gly Pro Cys Lys Ala Ile Met Lys Arg 1 5 10 15

Phe Phe Phe Asn Ile Phe Thr Arg Gln Cys Glu Glu Phe Ile Tyr Gly 20 25 30

Gly Cys Glu Gly Asn Gln Asn Arg Phe Glu Ser Leu Glu Glu Cys Lys 35 40 45

Lys Met Cys 50

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 51 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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5	·	Cys 1	Leu	Leu	Pro	Leu 5	Asp	Tyr	Gly	Pro	Cys 10	Arg	Ala	Leu	Leu	Leu 15	Arg
10			Tyr	Tyr	Asp 20	Arg	Tyr	Thr	Gln	Ser 25	Cys	Arg	Gln	Phe	Leu 30	Tyr	Gly
		Gly	Cys	Glu 35	Gly	Asn	Ala	Asn	Asn 40	Phe	Tyr	Thr	Trp	Glu 45	Ala	Cys	Asp
15 []	20 Mil. s	Asp	Ala 50	Cys		•			•	•							
	(2)																
		(i)	(B)	LEI TYI STI	NGTH:	: 51 emino EDNES	amir ac: SS: s	no ao id sing:	cids								
125 14 15 15 15 15 15 15 15 15 15 15 15 15 15		(ii)	MOLE	ECULI	Е ТҮІ	PE: I	pept:	ide									
30		(xi)	SEQ	JENCI	E DES	SCRII	PTIO	N: S	EQ II	ОИС	:3:						
		Cys 1	Phe	Leu	Glu	Glu 5	Asp	Pro	Gly	Ile	Суs 10	Arg	Gly	Tyr	Ile	Thr 15	Arg
35		Tyr	Phe	Tyr	Asn 20	Asn	Gln	Thr	Lys	Gln 25	Cys	Glu	Arg	Phe	Lys 30	Туr	Gly
40		Gly	Cys	Leu 35	Gly	Asn	Met	Asn	Asn 40	Phe	Glu	Thr	Leu	Glu 45	Glu	Cys	Lys
40																	

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

(2) INFORMATION FOR SEQ ID NO:4: 5 (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 54 amino acids (B) TYPE: amino acid (C) STRANDEDNESS: single 10 (D) TOPOLOGY: linear (ii) MOLECULE TYPE: peptide 15 L3 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4: Cys Arg Leu Gln Val Ser Val Asp Asp Gln Cys Glu Gly Ser Thr Glu 15 10 5 Lys Tyr Phe Phe Asn Leu Ser Ser Met Thr Cys Glu Lys Phe Phe Ser 20 Gly Gly Cys His Arg Asn Arg Ile Glu Asn Arg Phe Pro Asp Glu Ala N 40 Thr Cys Met Gly Phe Cys 50 30 (2) INFORMATION FOR SEQ ID NO:5: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 51 amino acids 35 (B) TYPE: amino acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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Asn Ile Cys 50

		(xi)	SEQU	JENCI	E DES	SCRII	OITS	1: SI	EQ II	ON C	: 5 :						
5		Cys 1	Leu	Thr	Pro	Ala 5	Asp	Arg	Gly	Leu	Cys 10	Arg	Ala	Asn	Glu	Asn 15	Arg
		Phe	Tyr	Tyr	Asn 20	Ser	Val	Ile	Gly	Lys 25	Cys	Arg	Pro	Phe	Lys 30	Tyr	Ser
10		Gly	Cys	Gly 35	Gly	Asn	Glu	Asn	Asn 40	Phe	Thr	Ser	Lys	Gln 45	Glu	Cys	Leu
15		Arg	Ala 50	Cys				٠									
	(2)	INFO	TAM S	ON I	FOR S	SEQ 1	D NO	D:6:									
1 1		(i)	(A) (B) (C)	LEI TYI STI	NGTH PE: & RANDI	ARACT : 51 amino EDNES	amii o ac: SS: :	no ao id sing:	cids								
		(ii)	MOLE	ECULI	E TY1	PE: I	pept:	ide									
30		(xi)	SEQ	JENC!	E DE	SCRI	PTIO	N: S	EQ I	D NO	:6:						
		Cys 1	Tyr	Ser	Pro	Lys 5	Asp	Glu	Gly	Leu	Cys 10	Ser	Ala	Asn	Val	Thr 15	Arg
35		Tyr	Tyr	Phe	Asn 20	Pro	Arg	Tyr	Arg	Thr 25	Cys	Asp	Ala	Phe	Thr 30	Tyr	Thr
		Gly	Cys	Gly	Gly	Asn	Asp	Asn	Asn	Phe	Val	Ser	Arg	Glu 45	Asp	Cys	Lys

Arg Ala Cys

5	(2)	INFO	RMATI	ON	FOR S	SEQ	ID NO	0:7:									
10		(i)	(B)	LEI TYI STI	NGTH PE: 8 RANDI	: 37 amin EDNE:	TERIS amin o aci SS: s lines	no a id sing:	cids								
		(ii)	MOLE	CULI	Е ТҮ!	PE:]	pepti	ide									
15																	
		(xi)	SEQU	IENCI	E DES	SCRI	OITG	1: SI	EQ II	ои с	:7:						
20		Lys 1	Lys	Gly	Phe	Ile 5	Gln	Arg	Ile	Ser	Lys 10	Gly	Gly	Leu	Ile	Lys 15	Th
		Lys	Arg	Lys	Arg 20	Lys	Lys	Gln	Arg	Val 25	Lys	Ile	Ala	Tyr	Glu 30	Glu	Il
25		Phe	Val	Lys 35	Asn	Met											
	(2)	INFO	RMATI	ON I	FOR S	SEQ :	ID NO	D:8:									
30		(i)	-	LEI	NGTH	: 27	TERIS amin	no a									
			(C)	ST	RANDI	EDNE	SS:	sing:	le								

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

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5		Ala 1	Lys	Ala	Leu	Lys 5	Lys	Lys	Lys	Lys	Met 10	Pro	Lys	Leu	Arg	Phe 15	Ala
		Ser	Arg	Ile	Arg 20	Lys	Ile	Arg	Lys	Lys 25	Gln	Phe					
10	(2)	INFOR	TAM	ON E	FOR S	SEQ I	D NO	0:9:									
10		(i)	(A) (B) (C)	LEN TYI STI	NGTH: PE: & RANDE	: 276 mino EDNES	s ami	singl	acids	5							
15 1 3			(D)	TOI	OLOC	3Y: 3	linea	ar									
1		(ii)	MOLE	ECULE	E TYI	PE: p	pepti	ide									-
		(xi)	SEQU	JENCI	E DES	SCRII	PTIO	N: SE	EQ II	ои с	:9:						
atta ture from milia familia		Asp 1	Ser	Glu	Glu	Asp 5	Glu	Glu	His	Thr	Ile 10	Ile	Thr	Asp	Thr	Glu 15	Leu
		Pro	Pro	Leu	Lys 20	Leu	Met	His	Ser	Phe 25	Cys	Ala	Phe	Lys	Ala 30	Asp	Asp
30		Gly	Pro	Cys 35	Arg	Ala	Ile	Met	Lys 40	Arg	Phe	Phe	Phe	Asn 45	Ile	Phe	Thr
25		Arg	Gln 50	Cys	Glu	Glu	Phe	Ile 55	Tyr	Gly	Gly	Cys	Glu 60	Gly	Asn	Gln	Asn
35		Arg 65	Phe	Glu	Ser	Leu	Glu 70	Glu	Cys	Lys	Lys	Met 75	Cys	Thr	Arg	Asp	Asn 80
40		Ala	Asn	Arg	Ile	Ile 85	Lys	Thr	Thr	Leu	Gln 90	Gln	Glu	Lys	Pro	Asp 95	Phe

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

	Cys	Phe	Leu	Glu 100	Glu	Asp	Pro	Gly	Ile 105	Cys	Arg	Gly	Tyr	11e 110	Thr	Arg
5	Tyr	Phe	Tyr 115	Asn	Asn	Gln	Thr	Lys 120	Gln	Cys	Glu	Arg	Phe 125	Lys	Tyr	Gly
	Gly	Cys 130	Leu	Gly	Asn	Met	Asn 135	Asn	Phe	Glu	Thr	Leu 140	Glu	Glu	Cys	Lys
10	Asn 145	Ile	Cys	Glu	Asp	Gly 150	Pro	Asn	Gly	Phe	Gln 155	Val	Asp	Asn	Tyr	Gly 160
15	Thr	Gln	Leu	Asn	Ala 165	Val	Asn	Asn	Ser	Leu 170	Thr	Pro	Gln	Ser	Thr 175	Lys
	Val	Pro	Ser	Leu 180	Phe	Glu	Phe	His	Gly 185	Pro	Ser	Trp	Cys	Leu 190	Thr	Pro
. . . .	Ala	Asp		Gly	Leu	Cys	Arg	Ala 200	Asn	Glu	Asn	Arg	Phe 205	Tyr	Tyr	Asn
	Ser	Val 210	Ile	Gly	Lys	Cys	Arg 215	Pro	Phe	Lys	Tyr	Ser 220	Gly	Cys	Gly	Gly
≟ 225 ∐ ≟	Asn 225	Glu	Asn	Asn	Phe	Thr 230	Ser	Lys	Gln	Glu	Cys 235	Leu	Arg	Ala	Cys	Lys 240
]] 30	Lys	Gly	Phe	Ile	Gln 245	Arg	Ile	Ser	Lys	Gly 250	Gly	Leu	Ile	Lys	Thr 255	Lys
30	Arg	Lys	Arg	Lys 260	Lys	Gln	Arg	Val	Lys 265	Ile	Ala	Tyr	Glu	Glu 270	Ile	Phe
35	Val	Lys	Asn 275	Met		-										

(2) INFORMATION FOR SEQ ID NO:10:

40

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 23 amino acids

(D) TOPOLOGY: linear 5 (ii) MOLECULE TYPE: peptide 10 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:10: Lys Thr Lys Arg Lys Arg Lys Gln Arg Val Lys Ile Ala Tyr Glu 15 10 15 Glu Ile Phe Val Lys Asn Met 20 (2) INFORMATION FOR SEQ ID NO:11: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 23 amino acids (B) TYPE: amino acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear (ii) MOLECULE TYPE: peptide 30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11: Lys Lys Lys Lys Met Pro Lys Leu Arg Phe Ala Ser Arg Ile Arg 15 10 35 Lys Ile Arg Lys Lys Gln Phe 20 (2) INFORMATION FOR SEQ ID NO:12:

(B) TYPE: amino acid(C) STRANDEDNESS: single

	(A) LENGTH: 17 amino acids
	(B) TYPE: amino acid
	(C) STRANDEDNESS: single
5	(D) TOPOLOGY: linear
	(ii) MOLECULE TYPE: peptide
10	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:
	Ala Lys Leu Asn Cys Arg Leu Tyr Arg Lys Ala Asn Lys Ser Ser Lys
15	1 5 10 15
1 1 120	Leu
2 0 -≟	(2) INFORMATION FOR SEQ ID NO:13:
	(i) SEQUENCE CHARACTERISTICS:(A) LENGTH: 15 amino acids(B) TYPE: amino acid(C) STRANDEDNESS: single(D) TOPOLOGY: linear
III AND	(ii) MOLECULE TYPE: peptide
30	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:
35	Thr Ser Asp Gln Ile His Phe Phe Phe Ala Lys Leu Asn Cys Arg 1 5 10 15
	(2) INFORMATION FOR SEQ ID NO:14:
40	(i) SEQUENCE CHARACTERISTICS:

(i) SEQUENCE CHARACTERISTICS:

(D) TOPOLOGY: linear . 5 (ii) MOLECULE TYPE: peptide 1.000 (1.00 · 1 10 Constitution and the second second (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14: Ser Glu Lys Thr Leu Arg Lys Trp Leu Lys Met Phe Lys Lys Arg Glu 15 5 15 Leu Glu Glu Tyr 20 (2) INFORMATION FOR SEQ ID NO:15: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 15 amino acids (B) TYPE: amino acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear (ii) MOLECULE TYPE: peptide 30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:15: His Arg His His Pro Arg Glu Met Lys Lys Arg Val Glu Asp Leu 35 10 (2) INFORMATION FOR SEQ ID NO:16: (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18 amino acids

(A) LENGTH: 20 amino acids

(B) TYPE: amino acid(C) STRANDEDNESS: single

(C) STRANDEDNESS: single (D) TOPOLOGY: linear 5 (ii) MOLECULE TYPE: peptide 10 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:16: Phe Arg Lys Leu Thr His Arg Leu Phe Arg Arg Asn Phe Gly Tyr Thr 10 15 Leu Arg 13 ųS (2) INFORMATION FOR SEQ ID NO:17: **2**0 (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 12 amino acids (B) TYPE: amino acid M (C) STRANDEDNESS: single (D) TOPOLOGY: linear 25 fu (ii) MOLECULE TYPE: peptide ļi 30 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:17: Leu Tyr Lys Lys Ile Leu Lys Lys Leu Leu Glu Ala 10 35 (2) INFORMATION FOR SEQ ID NO:18: (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 26 amino acids 40 (B) TYPE: amino acid

(B) TYPE: amino acid

			(D)	101	OLO	31	TIME	31									
. 5		(ii)	MOLE	CULE	E TYI	PE: p	pept:	ide									
J														•	•		
10		(xi)	SEQU	ENCE	E DES	SCRII	OIT	V: SI	EQ II	ONO:	:18:						
		Asn 1	Gly	Leu	Lys	Arg 5	Asp	Lys	Leu	Gly	Cys 10	Glu	Tyr	Cys	Glu	Cys 15	Arg
15		Pro	Lys	Arg	Lys 20	Leu	Île	Pro	Arg	Leu 25	Ser						
74 11	(2)	INFO	RMATI	ON F	FOR S	SEQ I	ED NO	0:19:	:								
		(i)	(B)	LEN TYP STF	IGTH PE: & RANDI	ARACT 161 amino EDNES	L ami	ino a id singl	acids	3							
S S I I I I I I I I I I I I I I I I I I		(ii)	MOLE	CULE	TYI	PE: p	pept	ide						•			
30		(xi)	SEQU	IENCE	E DES	SCRI	PTIO	N: S	EQ II	ОИС	:19:						
		Asp 1	Ser	Glu	Glu	Asp 5	Glu	Glu	His	Thr	Ile 10	Ile	Thr	Asp	Thr	Glu 15	Let
35		Pro	Pro	Leu	Lys 20	Leu	Met	His	Ser	Phe 25	Сув	Ala	Phe	Lys	Ala 30	Asp	Ası
		Clar	Dro	Cvc	λrα	בות	Tla	Mot	Lwe	Δrα	Phe	Phe	Phe	Δsn	Tle	Phe	Th

(C) STRANDEDNESS: single

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	Arg	Gln 50	Cys	Glu	Glu	Phe	Ile 55	Tyr	Gly	Gly	Cys	Glu 60	Gly	Asn	Gln	Asn
5	Arg 65	Phe	Glu	Ser	Leu	Glu 70	Glu	Cys	Lys	Lys	Met 75	Cys	Thr	Arg	Asp	Asn 80
	Ala	Asn	Arg	Ile	Ile 85	Lys	Thr	Thr	Leu	Gln 90	Gln	Glu	Lys	Pro	Asp 95	Phe
10	Суѕ	Phe	Leu	Glu 100	Glu	Asp	Pro	Gly	Ile 105	Cys	Arg	Gly	Tyr	Ile 110	Thr	Arg
1.5	Туг	Phe	Tyr 115	Asn	Gln	Gln	Thr	Lys 120	Gln	Cys	Glu	Arg	Phe 125	Lys	Tyr	Gly
15 [] []	Gly	Cys 130	Leu	Gly	Asn	Met	Asn 135	Asn	Phe	Glu	Thr	Leu 140	Glu	Glu	Cys	Lys
777 <u>7</u> 20	Asn 145	Ile	Cys	Glu	Asp	Gly 150	Pro	Asn	Gly	Phe	Gln 155	Val	Asp	Asn	Tyr	Gly 160
	Thr															
	(2) INFO	RMAT:	ION 1	FOR S	SEQ I	ID NO	0:20	:								
30	(i)	(A)) LEI) TY!) ST!	NGTH PE: 1 RAND	ARACT : 9 l nucle EDNE:	pase eic a SS: o	pai: acid doub!	rs								
35	(ii)				PE: 0											

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

	(2) INFORMATION FOR SEQ ID NO:21:	
5	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 37 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single	
	(D) TOPOLOGY: linear	
10		
	(ii) MOLECULE TYPE: other nucleic acid	
	(A) DESCRIPTION: /desc = "primer"	
15		
ð	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:	
¥į		
	GCTCCGCGGT GGCGATTCTG AGGAGGAGAT GAAGAAC	37
20		
	(2) INFORMATION FOR SEQ ID NO:22:	
	(') CROWDYGD GWADAGEDIGETGG	
=	(i) SEQUENCE CHARACTERISTICS:	
hi Me	(A) LENGTH: 38 base pairs	•
ويد Til	(B) TYPE: nucleic acid (C) STRANDEDNESS: single	
	(D) TOPOLOGY: linear	
	(b) Torollog1. Illieur	
	(ii) MOLECULE TYPE: other nucleic acid	
30	(A) DESCRIPTION: /desc = "primer"	
35	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:	
		20
	TCTGTCGACT CACATATTTT TAACAAAAT TTCTTCAT	38
	(2) INEODMATION FOR SEC ID NO.23.	

CCGCGGGGC

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	(1) SEQUENCE CIREMOTERIES.	
	(A) LENGTH: 13 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: double	
5	(D) TOPOLOGY: linear	
	(ii) MOLECULE TYPE: other nucleic acid	
	(A) DESCRIPTION: /desc = "adapter"	
	(II) Discritizioni / dese a daupeen	
10		
10		
	(wi) opposence description, see in MO.22.	-
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:	
15	mcma.camaaa a.ca	13
	TCTAGATAAA AGA	13
	(a) TWEEDWARTON FOR CEO TO NO 24	
114 1. i	(2) INFORMATION FOR SEQ ID NO:24:	
- T-1		
	(i) SEQUENCE CHARACTERISTICS:	
20	(A) LENGTH: 38 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single	
	(D) TOPOLOGY: linear	
heis Pala		
25	(ii) MOLECULE TYPE: other nucleic acid	
ls Ls	(A) DESCRIPTION: /desc = "primer"	
		•
30	·	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:	
	ATCTCTAGAT AAAAGAGATT CTGAGGAAGA TGAAGAAC	38
35	(2) INFORMATION FOR SEQ ID NO:25:	
	·	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 32 base pairs	
	(B) TYPE: nucleic acid	
40	(C) STRANDEDNESS: single	

	(ii) MOLECULE TYPE: other nucleic acid	
	(A) DESCRIPTION: /desc = "primer"	
5	(27, 2200.121.1201.1 , 4000 }	
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:	
10		
	TCTGTCGACT CAGGTTCCAT AATTATCCAC CT	32
	(2) INFORMATION FOR SEQ ID NO:26:	
15	(i) SEQUENCE CHARACTERISTICS:	,
	(A) LENGTH: 33 base pairs	
	(B) TYPE: nucleic acid	
·.i	(C) STRANDEDNESS: single	
7	(D) TOPOLOGY: linear	
20		
	(ii) MOLECULE TYPE: other nucleic acid	
Ħ	(A) DESCRIPTION: /desc = "primer"	
======		
IJ.		
25 U 	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:	
	AGGTATTTT ATAACAATCA GACAAAACAG TGT	. 33
30	(2) INFORMATION FOR SEQ ID NO:27:	
	(2) INFORMATION FOR ODE ID NO. 27.	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 33 base pairs	
35	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single	
	(D) TOPOLOGY: linear	
	(ii) MOLECULE TYPE: other nucleic acid	
40	(A) DESCRIPTION: /desc = "primer"	

(D) TOPOLOGY: linear

5	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:	
J	GAAACGTTCA CACTGTTTTG TCTGATTGTT ATA	33
	(2) INFORMATION FOR SEQ ID NO:28:	
10	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 34 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single	•
	(D) TOPOLOGY: linear	
15		
	(ii) MOLECULE TYPE: other nucleic acid	
j	(A) DESCRIPTION: /desc = "primer"	
٠. <u></u>		
oja Lui _		
2 0		
F=1	(') CROWENCE PROGRESSION CHO ID NO. 20.	
(T	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:	
1.5	CCAGCTCAAT GCTGTGAATA ACTCCCTGAC TCCG	34
25	CCAGCICAAI GCICIQAIIII NEIGCCIGIO 1000	
	(2) INFORMATION FOR SEQ ID NO:29:	
IJ	(i) SEQUENCE CHARACTERISTICS:	
L_i	(A) LENGTH: 36 base pairs	
30	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single	
	(D) TOPOLOGY: linear	
	(ii) MOLECULE TYPE: other nucleic acid	
35	(A) DESCRIPTION: /desc = "primer"	

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

	· ·	
	(2) INFORMATION FOR SEQ ID NO:30:	
5	(i) SEQUENCE CHARACTERISTICS:(A) LENGTH: 33 base pairs(B) TYPE: nucleic acid	
10	(C) STRANDEDNESS: single (D) TOPOLOGY: linear	
	<pre>(ii) MOLECULE TYPE: other nucleic acid (A) DESCRIPTION: /desc = "primer"</pre>	
15		
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:	
	GGGGGAAATG AAAACAATTT TACTTCCAAA CAA	33
20 13 13	(2) INFORMATION FOR SEQ ID NO:31:	
	(i) SEQUENCE CHARACTERISTICS:(A) LENGTH: 36 base pairs(B) TYPE: nucleic acid(C) STRANDEDNESS: single(D) TOPOLOGY: linear	
30	<pre>(ii) MOLECULE TYPE: other nucleic acid (A) DESCRIPTION: /desc = "primer"</pre>	
35	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:	
	CCTCAGACAT TCTTGTTTGG AAGTAAAATT GTTTTC	36
40	(2) INFORMATION FOR SEQ ID NO:32:	

CTTGGTTGAT TGCGGAGTCA GGGAGTTATT CACAGC

	(A) LENGTH: 24 base pairs	
	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single	
5	(D) TOPOLOGY: linear	
	(ii) MOLECULE TYPE: other nucleic acid	
	(A) DESCRIPTION: /desc = "primer"	
10		
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:	•
15	CCGATGCATT CATTTTGTGC ATTC	24
	(2) INFORMATION FOR SEQ ID NO:33:	
E	(i) SEQUENCE CHARACTERISTICS:	
20	(A) LENGTH: 24 base pairs	
ļå	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single	
41	(D) TOPOLOGY: linear	
25	(ii) MOLECULE TYPE: other nucleic acid	
12	(A) DESCRIPTION: /desc = "primer"	
l i		
	^	
30		
	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:	
	CCTCATGATT GCCCGACATG GGCC	24
35	(2) INFORMATION FOR SEQ ID NO:34:	
	(1) CHOMPING CUADACTED COTTO	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 29 base pairs	
40	(B) TYPE: nucleic acid	
40	(C) STRANDEDNESS: single	

(i) SEQUENCE CHARACTERISTICS:

5	<pre>(ii) MOLECULE TYPE: other nucleic acid (A) DESCRIPTION: /desc = "primer"</pre>	
10	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:	
10	GGTCCGCGGT GGTGATGCTG CTCAGGAGC	29
	(2) INFORMATION FOR SEQ ID NO:35:	
15	(i) SEQUENCE CHARACTERISTICS:	÷
	(A) LENGTH: 33 base pairs	
ŧ <u>I</u>	(B) TYPE: nucleic acid	
`\	(C) STRANDEDNESS: single	
	(D) TOPOLOGY: linear	
<u> </u>	(ii) MOLECULE TYPE: other nucleic acid	
tsi Es	(A) DESCRIPTION: /desc = "primer"	
þå £3	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:	
i j	GCAATGTTGT TTTTTCTATC CTCCAGCAAG CAT	33
30		
	(2) INFORMATION FOR SEQ ID NO:36:	
	(i) SEQUENCE CHARACTERISTICS:	
	(A) LENGTH: 34 base pairs	
35	(B) TYPE: nucleic acid	
	(C) STRANDEDNESS: single	
	(D) TOPOLOGY: linear	
	(ii) MOLECULE TYPE: other nucleic acid	
40	(A) DESCRIPTION: /desc = "primer"	

(D) TOPOLOGY: linear

5	(x1) SEQUENCE DESCRIPTION: SEQ ID NO:36:	
	GGATAGAAAA AAACAACATT GCAACAAGAA AAGC	34
•	(2) INFORMATION FOR SEQ ID NO:37:	
10	 (i) SEQUENCE CHARACTERISTICS: (A) LENGTH: 32 base pairs (B) TYPE: nucleic acid (C) STRANDEDNESS: single (D) TOPOLOGY: linear 	·
	(ii) MOLECULE TYPE: other nucleic acid (A) DESCRIPTION: /desc = "primer"	
Hart Han	(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:	
25 min of the second	GGTTCTTGCA TTCTTCCAGT GTCTCAAAAT TG	32